

WM-8 CONTAMINATED SOIL MANAGEMENT



BMP Objectives

- ☐ Perimeter Control
- ☐ Slope Protection
- ☐ Borrow and Stockpiles
- ☐ Drainage Areas
- ☐ Sediment Trapping
- ☒ Stream Protection
- ☐ Temporary Stabilizing
- ☐ Permanent Stabilizing

Definition and Purpose

These are procedures and practices to minimize or eliminate the discharges of pollutants to the drainage system or to watercourses from contaminated soil.

Appropriate Applications

- Contaminated soil management is implemented on construction projects in highly urbanized or industrial areas where soil contamination may have occurred due to spills, illicit discharges, and leaks from underground storage tanks. It may also apply to highway widening projects in older areas where median and shoulder soils may have been contaminated by aerially deposited lead (ADL).

Limitations

The procedures and practices presented in this BMP are general. The Contractor shall identify appropriate practices and procedures for the specific contaminants known to exist or discovered on-site.

General Considerations

Identifying Contaminated Areas

- Contaminated soils are often identified during project planning and development, with known locations identified in the plans and specifications.
- The Contractor shall review applicable reports and investigate appropriate callouts in the plans and specifications.
- The Contractor may further identify contaminated soils by investigating the following:
 - Past site uses and activities.
 - Detected or undetected spills and leaks.

- Acid or alkaline solutions from exposed soil or rock formations high in acid or alkaline forming elements.
- Look for contaminated soil as evidenced by discoloration, odors, differences in soil properties, abandoned underground tanks or pipes, or buried debris. Test suspected soils at a certified laboratory.

Education

- Prior to performing any excavation work at the locations containing material classified as hazardous, employees and subcontractors shall complete a safety training program which meets 29 CFR 1910.120 covering the potential hazards as identified.
- Employees and subcontractors shall be educated in identification of contaminated soil and on contaminated soil handling and disposal procedures.
- Regular meetings shall be held (or incorporated into regular safety meetings) to discuss and reinforce disposal procedures.

Handling Procedures for Material with Aerially Deposited Lead (ADL)

- Materials from areas designated as containing ADL may, if allowed by the contract special provisions, be excavated, transported, and used in the construction of embankments and/or backfill.
- Excavation, transportation, and placement operations shall result in no visible dust.
- Caution shall be used to prevent spillage of lead containing material during transport.
- The air quality shall be monitored during excavation of soils contaminated with lead.

Handling Procedures for Contaminated Soils

- To minimize on-site storage, dispose contaminated soil properly in accordance with all applicable regulations. All hazardous waste storage will comply with the requirements in Title 22, CCR, Sections 6626.250 to 66265.260.
- Test suspected soils at a Department of Health and Welfare-approved certified laboratory.
- If the soil is contaminated, work with the local regulatory agencies to develop options for treatment and/or disposal.
- Avoid temporary stockpiling of contaminated soils or hazardous material. If temporary stockpiling is necessary:
 - Cover the stockpile with plastic sheeting or tarps.
 - Install a berm around the stockpile to prevent runoff from leaving the area.
 - Do not stockpile in or near storm drains or watercourses.
- Remove contaminated material and hazardous material on exteriors of transport vehicles, and place either into the current transport vehicle or the excavation prior to the vehicle leaving the exclusion zone.
- Monitor the air quality continuously during excavation operations at all locations containing hazardous material.

- Procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work, including registration for transporting vehicles carrying the contaminated material and the hazardous material.
- Collect water from decontamination procedures and treat and/or dispose of it at an appropriate disposal site.
- Collect non-reusable protective equipment, once used by any personnel, and dispose of at an appropriate disposal site.
- Install temporary security fence to surround and secure the exclusion zone. Remove fencing when no longer needed.
- Excavate, transport, and dispose of contaminated material and hazardous material in accordance with the rules and regulations of the following agencies (the specifications of these agencies supersede the procedures outlined in this BMP):
 - United States Department of Transportation.
 - United States Environmental Protection Agency.
 - Occupational Safety and Health Administration.
 - Local regulatory agencies.

Procedures for Underground Storage Tank Removals

- Prior to commencing tank removal operations, obtain the required underground storage tank removal permits and approval from the federal, state, and local agencies, which have jurisdiction over such work.
- Arrange to have tested, as directed by the Engineer, any liquid or sludge found in the underground tank prior to its removal to determine if it contains hazardous substances.
- Following the tank removal, take soil samples beneath the excavated tank and perform analysis as required by the local agency representative(s).
- Remove the underground storage tank, any liquid and/or sludge found within the tank, and all contaminated substances and hazardous substances during the tank removal, and transport to disposal facilities permitted to accept such waste.

Water Control

- All necessary precautions and preventive measures shall be taken to prevent the flow of water, including groundwater, from mixing with hazardous substances or underground storage tank excavations. Such preventative measures may consist of, but are not limited to: berms, cofferdams, grout curtains, freeze walls, and seal course concrete or any combination thereof.
- If water does enter an excavation and becomes contaminated, such water, when necessary to proceed with the work, shall be dewatered consistent with NS-2 (Dewatering Operations).

Maintenance and Inspection

- Inspections shall be conducted as required by the NPDES permit or contract specifications.
- The Contractor's Water Pollution Control Manager, foreman, and/or construction supervisor shall monitor on-site contaminated soil storage and disposal procedures.
- Air quality shall be monitored continuously during excavation operations at all locations containing hazardous material.
- Contaminated soils and hazardous substances/waste management shall be coordinated with the appropriate federal, state, and local agencies.